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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/674,627

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EXAMINER

VO, TED T

ART UNIT

PAPER NUMBER

2191

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/674,627	Applicant(s) JOSHI, PRAJAKTA S.	
	Examiner TED T. VO	Art Unit 2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/7/08, 1/30/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment filed on 01/30/2008.

Claims 60-62 are new.

Claims 34-59, and claims 60-62 are pending in the application.

Response to Arguments

2. This is in response to the arguments in Remarks, filed on 01/30/08.

With regard to the rejection under 35 USC 112 first para: In view of the amendment and the argument provided in the remarks p. 14-15, the rejection is withdrawn.

With regard to the rejection under 35 USC 102:

Claims are amending. Especially, with regard to newly amended claim 34:

A method of providing load balancing using a load balance switch and a plurality of site switches that each couple at least one host server to a network, the method comprising:

obtaining at one of said site switches mapping information that provides a translation between a private virtual IP address, configured at said site switch and associated with said at least one host server corresponding to said site switch, and a public virtual IP address; and

providing said mapping public virtual IP address from said site switch to at least one load balancing controller to enable said load balancing controller to update an address record to indicate said public virtual IP address as being associated with said site switch.

It appears in the remarks, Applicants argued that

"Independent claim 34 as amended herein recites, inter alia, "providing said public virtual IP address from said site switch to at least one load balancing controller to enable said load balancing controller to update an address record to indicate said public virtual IP address as being associated with said site switch."

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It is respectfully submitted that the present Office Action has not cites any passage of the White Paper that meets these specific limitations”.

Examiner response: The amendment has necessitated new ground rejection(s) in this office. Therefore, all the arguments will be considered but are moot in view of the new ground of rejections.

Examiner would direct to the arguments that the specification discusses the same subject matters of Seven items in p. 6 and the Figure of the White paper. When a local DNS looks up an authorized DNS via a controller GSLB switch, the response is returned to the client with the IP address information from the controller GSLB switch via the local DNS. This does the act:

“providing said mapping public virtual IP address from said site switch” because it provides the client to establish a connection within the site in London or a site in HongKong. The

Controller GSLB’s response with the information of HongKong web host for load balancing.

The update information is performed in the Controller that carriers the public VIP address and returns the address to the local DNS of a client in San Francisco. It has the ability to provide network update (See p. 2). It is common in this art to use the word “translation” to spell out for the act in which a server responds with an IP address. In Page 4, it shows this word.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claim 62 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 62 is connected nowhere. It is improper dependency. The limitation in this claim is not understandable.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 34-62 are rejected under 35 U.S.C. 102(b) as being anticipated by White Paper from Foundry Networks, “Server Load Balancing in Today’s Web-enabled Enterprises” (Hereinafter: White Paper), 4-2002.

Given the broadest reasonable interpretation of followed claims in light of the specification.

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As per Claim 34: White paper discloses,

A method of providing load balancing using a load balance switch and a plurality of site switches that each couple at least one host server to a network, the method comprising:

obtaining at one of said site switches mapping information that provides a translation between a private virtual IP address, configured at said site switch and associated with said at least one host server corresponding to said site switch, and a public virtual IP address; (See p. 6, the

Figure – a Site such as the box 4 in the figure, having a Controller GSLB switch that configures to associate with at least one host server: HongKong); *and*

providing said mapping public virtual IP address from said site switch to at least one load balancing controller to enable said load balancing controller to update an address record to indicate said public virtual IP address as being associated with said site switch.

(See p. 6: Controller GSLB's response with the information of HongKong web host for load balancing. The update information is performed in the Controller that carries the public VIP address and returns the address to the local DNS of a client in San Francisco. It has the ability to provide network update (See p. 2).

As per Claim 35: White paper discloses, *The method of claim 34 wherein providing said public virtual IP address from said site switch to said at least one load balancing controller includes providing said virtual IP address to a load balancing controller located at said load balance switch* (Refer to the operation of the Controller GSLB Switch, and look up process 4, in p. 6).

As per Claim 36: White paper discloses, *The method of claim 35 wherein providing said public virtual IP address from said site switch to said at least one load balancing controller further*

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includes providing said public virtual IP address to a load balancing controller located at said site switch, to enable said site switch to balance traffic among plural ones of said at least one host server corresponding to said site switch and associated with said private virtual IP address (Refer to the operation of the Controller GSLB Switch, and look up processes 4, for search the best IP address, in p. 6).

As per Claim 37: White paper discloses, *The method of claim 34 wherein public virtual IP addresses received by said load balancing controller as part of reply to a query for network address and that do not have indication in said address record as being associated with corresponding said site switches, are treated as real IP addresses by said load balancing controller and are excluded from having applied thereto any metric of a load balancing algorithm that is usable with virtual IP addresses.* See the operation in the Figure in Figure 6, and look up process. Particularly, in the paragraph in p. 5, “SLB Technique”, discussing about allowing the client to access as a real server for subsequent requests.

As per Claim 38: White paper discloses, *The method of claim 34 wherein said public virtual IP address provided to said at least one load balancing controller enables said load balancing controller to apply at least one metric of a load balancing algorithm to said public virtual IP address, said at least one metric including an active bindings metric that prefers a virtual IP address, configured at respective said site switches, having a maximum number of active ones of said host servers bound to said preferred virtual IP address, rather than preferring another virtual IP address having a number of bound active ones of said host servers that is less than said maximum number* (Refer to the functionality of GSLB Metrics™, as seen in the discussion in p. 9, particularly in High Availability and Maximum Scalability).

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As per Claim 60: The White paper discloses, *The method of claim 34 wherein said obtaining at said site switch said mapping information includes obtaining at said site switch said mapping information from a mapping device that includes a network address translation device or a firewall device*

(See p. 10, “Firewall Load balancing”. It should be note that firewall is no longer new in the art).

As per Claim 39: Regarding, *A method of providing load balancing using a load balance switch and a plurality of site switches that each couple at least one server to a network, the method comprising:*

receiving, at said load balance switch, a public virtual IP address that is mapped to a private virtual IP address configured at one of said site switches, said private virtual IP address being associated with said at least one host server corresponding to said site switch

updating an address record of said load balance switch to indicate said received public virtual IP address as being associated with said site; and

applying, at said load balance switch, at least one metric, usable with virtual IP addresses, of a load balancing algorithm to said public virtual IP address

See rationale addressed in the rejection of Claim 34.

As per Claim 40: Regarding, *The method of claim 39 wherein public virtual IP addresses received by said load balance switch as part of reply to a query for network addresses and*

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that do not have indication in said address record as being associated with corresponding said site switches, are treated as real IP addresses by said load balance switch and are excluded from having applied thereto said at least one metric of said load balancing algorithm that is usable with virtual IP addresses. See rationale addressed in the rejection of claim 37.

As per Claim 41: Regarding, *The method of claim 39 wherein receiving said public virtual IP address, at said load balance switch, includes receiving said public virtual IP address at said load balance switch from said site switch, which is remote from said load balance switch, for entry into said address record.* See rationale addressed in the rejection of claim 34.

As per Claim 42: Regarding, *The method of claim 39 wherein said at least one metric includes an active bindings metric that prefers a virtual IP address, configured at respective said site switches, having a maximum number of active ones of said host servers bound to said preferred virtual IP address, rather than preferring another virtual IP address having a number of bound active ones of said host servers that is less than said maximum number.* See rationale addressed in the rejection of Claim 38.

As per Claims 43-46, 61: See the rationale addressed in the rejection of Claim 34-38, 60.

As per Claims 47-50: See the rationale addressed in the rejection of Claim 34-38.

As per Claims 51-55: See the rationale addressed in the rejection of Claim 34-38.

As per Claims 56-59: See the rationale addressed in the rejection of Claim 34-38.

As per claim 62: The claim is indefinite. However, the limitation of claim 62 is similar to claim 60. Therefore, it is rejected as in the same rationale addressed in claim 60.

Claim Rejections – 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 34-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over AlteonWebSystems (hereinafter: Alteon), “Enhancing Web User Experience with Global Server Load Balancing” in view of Cisco Document (hereinafter: Cisco), “Configuring the CSS Domain Name Service”.

A method of providing load balancing using a load balance switch (Authorized Web Switch) and a plurality of site switches (See Figure One, a web switch at every DNS) that each couple at least one host server to a network, the method comprising:

obtaining at one of said site switches mapping information that provides a translation between a private virtual IP address, configured at said site switch and associated with said at least one host server corresponding to said site switch, and a public virtual IP address;

(See p. 1 and p. 2, Section GSLB overview explains a client, such as the client shown in FIGURE ONE, looks up at a local DNS server (1) asking for a website. The Local DNS, which IP address is considered as local to the client, examines its cache for the website. If the

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information is not available in the local server, it requests a web switch at an authorized DNS (site A), where at the authorized DNS, the web switch performs a selection, for example, a site B (i.e. translation between local DNS where the Client starts site B (public) in response to the return from the query: configured at said site switch [The web switch at site A] and associated with said at least one host server[site B] corresponding to said site switch), ***and***

providing said mapping public virtual IP address (i.e. the return of “3” with the information of site B) ***from said site switch to at least one load balancing controller to enable said load balancing controller to update an address record to indicate said public virtual IP address as being associated with said site switch*** [DSSP components is embedded in any DNS – See DSSP Updates within Web Switches at site A, Site B, site C etc.]

(See p. 1 and p. 2: In the Figure one, at the web switch site A, it provides a return address of the VIP address site B. See Figure one, and p.3, in associating with GSLB, DSSP components in web switches provide periodic updates and trigger updates: This act addresses “*address record to indicate said public virtual IP address as being associated with said site switch*”.

The Alteon uses the terms “select” to provide web switch at an authorized DNS; does not the name private VIP and public VIP as for obtaining the selection.

Cisco shows an application peering protocol, which is in a similar network topology as of Alteon. It include NDS exchange policies, where each DNS has private VIP addresses and public VIP addresses (see p. 12), where private VIP address is considered as an address connected within a user to his server (See p. 12: user to server1/DNS1) and public VIP address is considered as the connection within DNS1 to other servers (see p.12-13), Alto Cisco shows the

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act that is configured to switch from a private VIP address for obtaining a public VIP is as “translation” (see p. 2: item 1, see p. 12, item 2, etc).

It would be obvious to ordinary in the art in combining the arts of Alteon and Cisco because the differences are only terminological uses in expression for VIP addresses in the GSLB.

As per Claim 35: Alteon and Cisco further disclose, *The method of claim 34 wherein providing said public virtual IP address from said site switch to said at least one load balancing controller includes providing said virtual IP address to a load balancing controller located at said load balance switch* (See p. 2, the Figure one and its explanation, also should refer to the meaning of GSLB).

As per Claim 36: Alteon and Cisco further disclose, *The method of claim 35 wherein providing said public virtual IP address from said site switch to said at least one load balancing controller further includes providing said public virtual IP address to a load balancing controller located at said site switch, to enable said site switch to balance traffic among plural ones of said at least one host server corresponding to said site switch and associated with said private virtual IP address* (See Figure one, and GSLB operation).

(Refer to the function of CGS; it provides the best IP addresses based on the info from the GSLB Metrics™ (Also see DNS lookup Process), and causes to select a real server (balancing), as seen in the Figure of p. 5).

As per Claim 37: Alteon and Cisco further disclose, *The method of claim 34 wherein public virtual IP addresses (e.g. site B) received by said load balancing controller (e.g. Web switch at*

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site A) *as part of reply to a query for network address (“2” and “3”) and that do not have indication in said address record as being associated with corresponding said site switches, are treated as real IP addresses by said load balancing controller and are excluded from having applied thereto any metric of a load balancing algorithm that is usable with virtual IP addresses* (See p. 2, including three bullets, GLSB, develops a list or order list of sites, including site health, and geographic location, and see all last three paragraphs).

As per Claim 38: Alteon and Cisco further disclose, *The method of claim 34 wherein said public virtual IP address provided to said at least one load balancing controller enables said load balancing controller to apply at least one metric of a load balancing algorithm to said public virtual IP address*, (See GSLB operation in p. 2) *said at least one metric including an active bindings metric that prefers a virtual IP address* (i.e. “web switch”, that provides an order list of sites that DNS uses when responding to the client requests), *configured at respective said site switches, having a maximum number of active ones of said host servers bound to said preferred virtual IP address, rather than preferring another virtual IP address having a number of bound active ones of said host servers that is less than said maximum number* (See text in p. 2, refer to “maximum connection thresholds”).

As per Claim 60: Alteon and Cisco further disclose, White paper discloses, *The method of claim 34 wherein said obtaining at said site switch said mapping information includes obtaining at said site switch said mapping information from a mapping device that includes a network address translation device or a firewall device* (see p. 6, all four categories in Alteon Websystems GSLB Advantages – it includes a firewall devices – It should be note that firewall is no longer new in the art).

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As per Claim 39: Regarding, *A method of providing load balancing using a load balance switch and a plurality of site switches that each couple at least one server to a network, the method comprising:*

receiving, at said load balance switch, a public virtual IP address that is mapped to a private virtual IP address configured at one of said site switches, said private virtual IP address being associated with said at least one host server corresponding to said site switch

updating an address record of said load balance switch to indicate said received public virtual IP address as being associated with said site; and

applying, at said load balance switch, at least one metric, usable with virtual IP addresses, of a load balancing algorithm to said public virtual IP address

See rationale addressed in the rejection of Claim 34.

As per Claim 40: Regarding, *The method of claim 39 wherein public virtual IP addresses received by said load balance switch as part of reply to a query for network addresses and that do not have indication in said address record as being associated with corresponding said site switches, are treated as real IP addresses by said load balance switch and are excluded from having applied thereto said at least one metric of said load balancing algorithm that is usable with virtual IP addresses.* See rationale addressed in the rejection of claim 37.

As per Claim 41: Regarding, *The method of claim 39 wherein receiving said public virtual IP address, at said load balance switch, includes receiving said public virtual IP address at said*

load balance switch from said site switch, which is remote from said load balance switch, for entry into said address record. See rationale addressed in the rejection of claim 34.

As per Claim 42: Regarding, *The method of claim 39 wherein said at least one metric includes an active bindings metric that prefers a virtual IP address, configured at respective said site switches, having a maximum number of active ones of said host servers bound to said preferred virtual IP address, rather than preferring another virtual IP address having a number of bound active ones of said host servers that is less than said maximum number.* See rationale addressed in the rejection of Claim 38.

As per Claims 43-46, 61: See the rationale addressed in the rejection of Claim 34-38, 60.

As per Claims 47-50: See the rationale addressed in the rejection of Claim 34-38.

As per Claims 51-55: See the rationale addressed in the rejection of Claim 34-38.

As per Claims 56-59: See the rationale addressed in the rejection of Claim 34-38.

As per claim 62: The claim is indefinite. However, the limitation of claim 62 is similar to claim 60. Therefore, it is rejected as in the same rationale addressed in claim 60.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted T. Vo whose telephone number is (571) 272-3706. The examiner can normally be reached on 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708.

The facsimile number for the organization where this application or proceeding is assigned is the Central Facsimile number 571-273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

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Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTV
April 10, 2008

/Ted T. Vo/
Primary Examiner, Art Unit 2191